

IMPLANTABLE HEART MONITORS HAVING FLAT CAPACITORS WITH CURVED PROFILES

Abstract of the Disclosure

5 Implantable heart-monitoring devices, such as defibrillators, pacemakers, and
cardioverters, detect onset of abnormal heart rhythms and automatically apply
corrective electrical therapy, specifically one or more bursts of electric charge, to
abnormally beating hearts. Critical parts in these devices include the capacitors that
store and deliver the bursts of electric charge. Some devices use flat aluminum
10 electrolytic capacitors have cases with right-angle corners which leave gaps when
placed against the rounded interior surfaces of typical device housings. These gaps
and voids not only waste space, but ultimately force patients to endure implantable
devices with larger housings than otherwise necessary. Accordingly, the inventors
devised several capacitor structures that have curved profiles conforming to the
15 rounded interior surfaces of device housings. Some exemplary capacitor
embodiments include two or more staggered capacitor elements, and other
embodiments stagger capacitors of different types and/or sizes.

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